

I claim:

1. A bicycle frame comprising:

a central load bearing assembly comprising two spaced-apart frame
5 elements maintained in spaced-apart relationship by a plurality of spacers;
a swingarm assembly having first and second ends, said first end being
pivotably mounted on said central load bearing assembly at a first attachment
point, said second end of said swingarm assembly having a rear wheel
releasably secured thereon;

10 a headset mounted on said central load bearing assembly for
supporting a steering and front fork assembly, said front fork assembly having
a front wheel releasably mounted thereon; and

a crank bracket mounted between said two spaced-apart frame
elements of said central load bearing assembly, said crank bracket being
15 located offset from said first attachment point of said swingarm assembly, said
crank bracket supporting a crank assembly.

2. The frame according to claim 1, wherein the two spaced-apart frame
elements are interconnected by a spine, the spine being formed by folding a
20 plate having opposed frame element patterns formed therein.

3. The frame according to claim 1, wherein the two spaced-apart frame
elements are separate plate structures.

25 4. The frame according to any one of claims 1 to 3, wherein one or more
additional plates elements are incorporated to provide additional strength to
the central load bearing structure.

30 5. The frame according to any one of claims 1 to 3, wherein said headset
is pivotable within the plane of said central load bearing assembly to allow
said steering and front fork assembly to rotate between an operational
position and a compact stowed position, said headset being lockable in either
of said operational or stowed positions.

6. The frame according to any one of claims 1 to 3, wherein said swingarm assembly is detachable from said first attachment point.

7. The frame according to claim 6, wherein said central load bearing assembly further comprises a second attachment point for attachment of said swingarm assembly in a compact stowed configuration.

8. The frame according to any one of claims 1 to 3, wherein said headset is positioned between said frame elements.

9. The frame according to any one of claims 1 to 3 further comprising a tail block mounted on said central load bearing assembly, said tail block supporting a seat assembly for a rider.

10. The frame according to claim 9, wherein said tail block is positioned between said frame elements.

11. The frame according to any one of claims 1 to 3, wherein said crank bracket is of cylindrical configuration and positioned within corresponding apertures in said frame elements, said crank bracket being removeably retained by at least one circular clip.

12. The frame according to claims 9, wherein said swingarm assembly has a suspension attachment means for attachment of a shock absorber spanning from said swingarm assembly to a suspension attachment means on said tail block or frame.

13. The frame according to any one of claims 1 to 3, wherein said swingarm assembly is a single unitary structure.

14. The frame according to any one of claims 1 to 3, wherein said swingarm assembly is of plate-frame construction comprising a plurality of components arranged to support a rear wheel thereon.

15. The frame according to any one of claims 1 to 3, wherein swingarm assembly is detachably and pivotally connected to said frame elements by means of a pin and circular clip received in corresponding bores within said swingarm assembly and said frame elements.

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16. The frame according to any one of claims 1 to 3, wherein said spacers are held in place by threaded fasteners or weldments.

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17. The frame according to any one of claims 1 to 3, wherein operational elements added between said frame elements are substantially equal in width to said spacers.

18. The frame according to any one of claims 1 to 3, wherein said spacers provide support for mounting cable routing fixtures.

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19. The frame according to any one of claims 1 to 3, wherein said frame elements are made from a material selected from the group consisting of metal, fiberglass and composites.

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20. The frame according to any one of claims 1 to 3, wherein said frame elements are made from aluminum or titanium plate.

21. The frame according to any one of claims 1 to 3, wherein said frame elements comprise elongated slots or drill holes to reduce overall weight.

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22. The frame according to any one of claims 1 to 3, wherein said swingarm assembly further supports a gearing means and braking means.

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23. The frame according to any one of claims 1 to 3, wherein said frame is Y-shaped in side profile.

24. The frame according to any one of claims 1 to 3, wherein the two spaced frame elements are generally planar.

25. A method of forming a central load bearing assembly which has spaced apart frame elements, the frame elements providing for a first attachment point for a swingarm assembly, an attachment point for a headset, an attachment point for a tail block and an attachment point for a crank
- 5 bracket, the method comprising folding a blank having two opposed frame elements interconnected by a web where the blank is folded along the web to provide spaced-apart opposed frame elements interconnected by an integral spine formed by said web.